

- BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

THE MANAGEMENT OF PATIENTS WITH WHOOPING COUGH

The Editor—When one of our good "family doctors" suggested that we make "The Management of Patients With Whooping Cough" a subject for Bedside Medicine for Bedside Doctors, I was dubious about its interest. But I was mistaken. This, to me, is one of the most interesting and important discussions we have had.

Of course, we will have many and quickly changing methods of treatment of this extremely serious disease of childhood until a specific treatment is discovered, and then we will grow more uniform and routine in our management of its victims.

I am much impressed with Jessie Farmer's observation about how closely the public follow us in our innovations in treating a widely prevalent disease like whooping cough.

There is much food for thought in the wholesome, dignified manner in which many doctors frankly differ in their opinions of the value of this and that remedy. That's what these discussions are for, to help us find out each other's methods and opinions, and perhaps we and the public may profit thereby.

Bedside Medicine for Bedside Doctors now appears regularly. We have many letters commending it, and so far none that criticize. Several of the discussants tell us that their comments are their maiden efforts for publication.

We need a few more subjects suitable for discussion. Please make suggestions.

T. C. McCleave, M. D. (Medical Building, Oakland) — The management of patients with whooping cough involves first the highly important general hygienic care.

The child should be kept quiet, in warm, dust-free, well-ventilated rooms, or, preferably, as much as possible in the open air and sunshine if the weather is suitable. Properly regulated direct sunbaths to the naked skin are beneficial to the child's general condition, improving the appetite and nutrition. Sleeping-rooms should be well ventilated and warm. Practical points often neglected, but of no value in preventing the paroxysms which commonly occur when the child goes to bed, are to have him undress in a warm room and to thoroughly warm the bed into which he is to go, in cold weather using tennis flannel sheets or thin blankets instead of linen or cotton sheets. In a severe case, complete bed-rest for some days is advisable.

The diet should be nutritious and easily digested, in severe cases with vomiting preferably liquid or semi-liquid, and given in small feedings at intervals of two or three or four hours. When vomiting occurs, food taken immediately thereafter will often be retained.

But few drugs need be considered. Quinin, in doses of one and a half grains for each year of age, given three or four times daily, seems frequently to do good. Anti-spasmodics are, of course, indicated, and sodium bromide, belladonna and antipyrin, either separately or together, are most frequently used. Lately, I have used luminal in spasmodic coughs, in doses of from one-sixteenth to one-eighth grain every three or four hours, with

excellent effect. Codein, in appropriate dosage, may be necessary in some cases, and is, in my opinion, a very useful and unobjectionable drug. It is not "habit-forming," as many seem to think, rejecting it on that account. Other narcotics I never use. Inhalants are of little value, and their use is so commonly attended by impairment of ventilation as to make them objectionable. Especially obnoxious is a much-touted nostrum vaporized by heating, which I frequently find in use to the child's detriment.

Vaccine therapy with killed cultures of the Bordet-Gengou bacillus is often of value, though results are by no means uniform. Present practice is to use a (freshly prepared, if possible) polyvalent vaccine of much higher dosage than formerly believed sufficient. Three to five doses, on alternate days, are commonly used, beginning with from five hundred million to one billion organisms, and doubling the amount of each successive dose if excessive reactions are absent. Treatment should be begun as early as possible, and especially should exposed children be given prophylactic vaccine treatment, three doses as above outlined.

X-ray treatment of whooping cough is now widely used with very favorable effect, and is recommended in all cases where paroxysms are severe and do not yield readily to other treatment, or where cough is unduly prolonged, due to the persistence of enlarged tracheo-bronchial lymph nodes.

Many mothers and some physicians regard whooping cough as a disease of minor importance which all children must have sooner or later, and therefore not worth while trying to avoid. Nothing could be more fallacious. Whooping cough is responsible for a very high mortality in young children, and at any age may be followed by most serious consequences. Those entrusted with the care and supervision of children should therefore make every possible effort to protect them against this disease, and, if infected, to give them adequate treatment.

Hugh Berkley, M. D. (1136 West Sixth Street, Los Angeles) — Dr. McCleave's discussion leaves little unsaid, and is very clear and concise.

In cases with severe vomiting, it has been our personal routine to limit liquids and give the thicker foods, such as cereals, rice, custards, and the like. We feel that these foods are better retained than the liquids.

We have used inhalants and with definite benefit. In doing so we do not, however, use the tent method, but keep the steam in the room. This allows good ventilation as well as warm, moist air.

One factor which McCleave did not mention in the treatment of the disease, is the maintenance of a voluntary quarantine. The law allows these children to run free except for attending school. We believe it to be the duty of the physician in charge

to insist that children with whooping cough be kept away from other children except those known to have previously had the disease.

Prophylactic vaccine therapy in patients known to have been exposed is valuable and worth trying, though it is not 100 per cent effective.

H. J. Ullman, M. D. (Santa Barbara Cottage Hospital, Santa Barbara, California) — The value of the roentgen ray in the treatment of whooping cough during the early acute stage is being questioned. Our experience here has been limited, but our impression, gathered from the parents' statements, is that the severity and frequency of the paroxysms are lessened. In the later stages, and it is with these cases that we have had the most experience, we have found it to give marked relief. The effect is most noticeable where the cough has persisted for weeks and there has been no further response to drugs or vaccines. These individuals frequently show loss of weight, and they cannot get a night's rest because of the paroxysms, which are more frequent at this time.

The technique of treatment varies to some extent with different operators. Our method at present is to give small doses every day or every other day to the mediastinum and medial lung region, front and back alternately. Four in all of these are given, two anterior, two posterior, and the effect noted. In from ten days to two weeks this is repeated if necessary. The first series usually produces a distinct modification of the severity of the symptoms and is sufficient. This improvement has been noted as early as the night following the second dose. Occasionally, there will be a slight increase in the symptoms after the first sitting. In these cases it may be advisable to decrease the amount of radiation at subsequent sittings. No rule can be laid down for this. Each case must be individualized and the amount of the previous radiation taken into consideration. The age of the patient must be considered. The younger, the smaller the dose. Our cases, while a small series, have varied in age from infancy to over sixty-three. Our treatment has been entirely with the longer wave lengths after the report of Leonard, and we do not believe that the shorter wave lengths have any place in the treatment of pertussis.

The theory has been advanced that the effect of the radiation is on enlarged bronchial nodes. We have taken chest films in some of our cases and are not yet convinced that the irritation is entirely due to glandular enlargement, as we have obtained our results where no enlargement was demonstrated.

Finally, we believe that roentgenotherapy, for the present at least, should be reserved for the older subacute and "chronic" cases that have failed to respond to the established methods of treatment as outlined by Dr. McCleave.

We cannot emphasize too strongly that the roentgen treatment of whooping cough should only be done by a physician trained in such work. The possession of an x-ray apparatus and ability to take good pictures does not qualify a physician, much less a technician, to give treatments with such a powerful agent. Improperly used, it may do great

harm. In competent hands it is a perfectly safe procedure.

Myrl Morris, M. D. (490 Post Street, San Francisco) — Dr. McCleave has enumerated very concisely the salient points in the care and management of one of our most dreaded diseases. Particularly is it of value because his paper represents the results of years of practical experience.

In regard to the therapeutic value of radiation, we too were formerly of the opinion that definite, immediate improvement was noticed after the first or second roentgen-ray treatment, but since reading Dr. Faber's able and very convincing article in the *Journal of the American Medical Association*, September 12, 1925, we are withholding any definite conclusion. Dr. Faber has shown rather convincingly that the course of irradiated cases and a similar series of controlled untreated cases follow almost the same plotted curve through a course of eight weeks. With this in mind we probably have been overenthusiastic in drawing our conclusions without comparing these treated cases with untreated cases in the same epidemic and at the same period in the course of the disease.

We also have been interested in the effect of intramuscular injections of ether, but because of the pain and the necessity of a physician administering the injection we have withheld this treatment for our more severe cases and cases in tiny infants. These drawbacks are overcome by using the method of Goldbloom of Montreal, that is, of administering ether by rectum in a suspension of olive oil. He found that the ether was immediately taken up by the blood and excreted through the lung tissue, thereby getting the same effect as by intramuscular injection. According to his report, 90 per cent of his cases showed definite improvement.

Edward J. Lamb, M. D. (Central Building, Santa Barbara) — Hygienic care of the patient with whooping cough is of utmost importance.

The prophylactic treatment is worthy of consideration. My only mortality in whooping cough occurred in a premature baby four weeks old who had been exposed to whooping cough at home.

Diet, fresh air, sunshine, and warm bedding are all effective in warding off the paroxysmal attacks of coughing. Patients who are running a temperature of 100 degrees are confined to bed. Others are ambulatory or semi-ambulatory, depending upon their physical condition.

It has been my experience, through questioning parents, that inhalants (benzoin compound or creosote) are of great benefit. I find that by using the Robinson's electric steam kettle an even distribution of steam is maintained at little effort.

My results with vaccines have been favorable. Over 60 per cent show good results after vaccine therapy has been started. I believe that if a freshly prepared vaccine of Bodet and Genou bacillus (polyvalent) is used in large doses, one billion for an initial dose and doubling the dose each succeeding treatment, the treatments being given from two to five days apart, depending upon the severity of the

case, the duration of the disease will be shortened and the paroxysms lessened.

I have recommended x-ray therapy in infants under one year and also in children of marked instability. My cases treated by x-ray, although limited, have shown marked improvement.

Anti-spasmodics are used routinely for the cough. The heart is watched in every case. Tincture strophanthus, dose of mss.-mi. is used for stimulation. I would emphasize the importance of watching for cardiac weakness and the benefit derived from administering stimulation.

Calcidin, which contains 15 per cent available iodine in combination with calcium, seems to be the most effective drug to lessen the paroxysms. It is best administered in doses of gr. 1/3 every half hour for four or five doses, given at night.

Jessie C. Farmer, M. D. (Felton, California)—The belated adoption by the laity of remedial measures abandoned by the medical profession makes it difficult for the physician to enforce his plan of treatment of whooping cough in the homes of the afflicted. Cresoline or other repulsive smelling vapors yet smother the house of the pertussis victim. The vaccine wave has surged over the more advanced parents, leaving them with an exaggerated faith in the prophylactic and curative efficacy of dead cultures. Later there will be a clamor by the laity for the magic of the x-ray.

The people are following more closely than formerly our tortuous trail of changing methods, with this difference. We *hoped* our measures would prove to be specific, whereas the followers believe they are specific.

In treatment the first endeavor should be to clear away the debris of superstition. Unless for some imperative reason, do not add to the parents' panic by mentioning possible sequelae or complications. Try to instruct the mother to maintain a calm attitude during the paroxysm. Consternation and agitation on the part of the parent or attendant frightens the child and increases the severity of the spasm; also it encourages him to experiment in eliciting sympathy and solicitude.

Sulphate of codeine will help to allay the frequency and violence of the paroxysms, but should be withheld in the average cases.

Cerebral hemorrhage should be dreaded for two reasons: The immediate danger to life and the more than possible prospect of epilepsy at about puberty should the patient survive.

For hundreds of years all thinking people have been well aware of the communicability of whooping cough. Parents become panicky, and with reason, when their child contracts the disease; yet human nature is such that the probabilities are that otherwise admirable people will become lax before infectivity has passed and passively permit the child to infect others. Absolute quarantine seems a harsh measure, and would be effective only in those cases discovered at the inception of the disease. Again and again we must explain the caution and not become weary in our reiterated injunctions for isolation and a better sense of social obligation.

McCleave has covered the field of therapeutics and hygiene with clarity and brevity.

W. Edward Chamberlain, M. D. (Stanford University Hospital, San Francisco)—In the past two years a great many x-ray treatments have been given for whooping cough. Many articles have appeared in the literature, purporting to show the efficacy of the treatment. For the most part such articles consist in a description of a particular worker's technic, and a tabulated series of cases in which the administration of x-ray treatment was followed by marked improvement. (Post hoc ergo propter hoc.)

Struble (Journal A. M. A., vol. 85, page 815, September 12, 1925), working at the Stanford clinics (Children's Clinic and Division of Radiology), was the first worker to parallel his x-ray-treated cases with a series of untreated controls. His careful work gave us new information concerning the natural history of whooping cough, and in the light of this new information there seems to be little or no reason for supposing that x-ray therapy has any influence on this condition. In Struble's series the untreated cases ran the same course (displayed the same rapid improvement at the same stage of the disease) as did the x-ray-treated cases.

Lest it be thought that Struble's technic was at fault, it should be noted that in previously reported series dosage has not seemed important. Workers using relatively large doses obtained results apparently no different from those using the smaller doses. Struble's dosage approached very closely that used by Bowditch and Leonard.

Interestingly enough, the mothers of the children in Struble's x-ray-treated series held the x-ray responsible for the children's improvement; but parallel and equal improvement in the untreated controls indicated that this was a part of the natural course of the disease.

In the management of patients with whooping cough, then, I would leave out x-ray therapy, not through any feeling that the treatment in competent hands is dangerous, but on the ground that it is futile.

Suppuration of Shoulder Joint—The two cases reported by Benjamin S. Barnes, Shenandoah, Iowa (Journal A. M. A., March 6, 1926), illustrate the importance of the early drainage of suppurating joints. In one of the cases, destruction of joint structures had occurred when Barnes first saw the patient. Immobilization may be advisable early in severe cases, but as the severity of the symptoms abates it is probably best to allow considerable freedom of movement combined later with passive motion. The active exercise of suppurating joints, as advocated by Willems, seems too severe for the more acute cases. If ankylosis seems unavoidable, precautions should be taken to establish the most useful position of the parts that is possible.

The American Board of Otolaryngology has arranged for an examination during the month of April at Stanford University Medical School, Clay and Webster Streets, San Francisco, California, Tuesday, April 27, at 9 a. m. Applications may be secured from the secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

The Phi Chi Medical Fraternity will hold a luncheon during the annual session of the California Medical Association in Oakland. The exact date and place of the luncheon has not yet been decided upon, but a notice will be posted in a convenient place at headquarters. Members are urged to attend.